

The 1940's

MINNEAPOLIS STREET CAR AND BUS SYSTEM

CONSULT THIS GUIDE FOR ROUTING
AND LOCATION OF LINES



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--- CITY LIMITS

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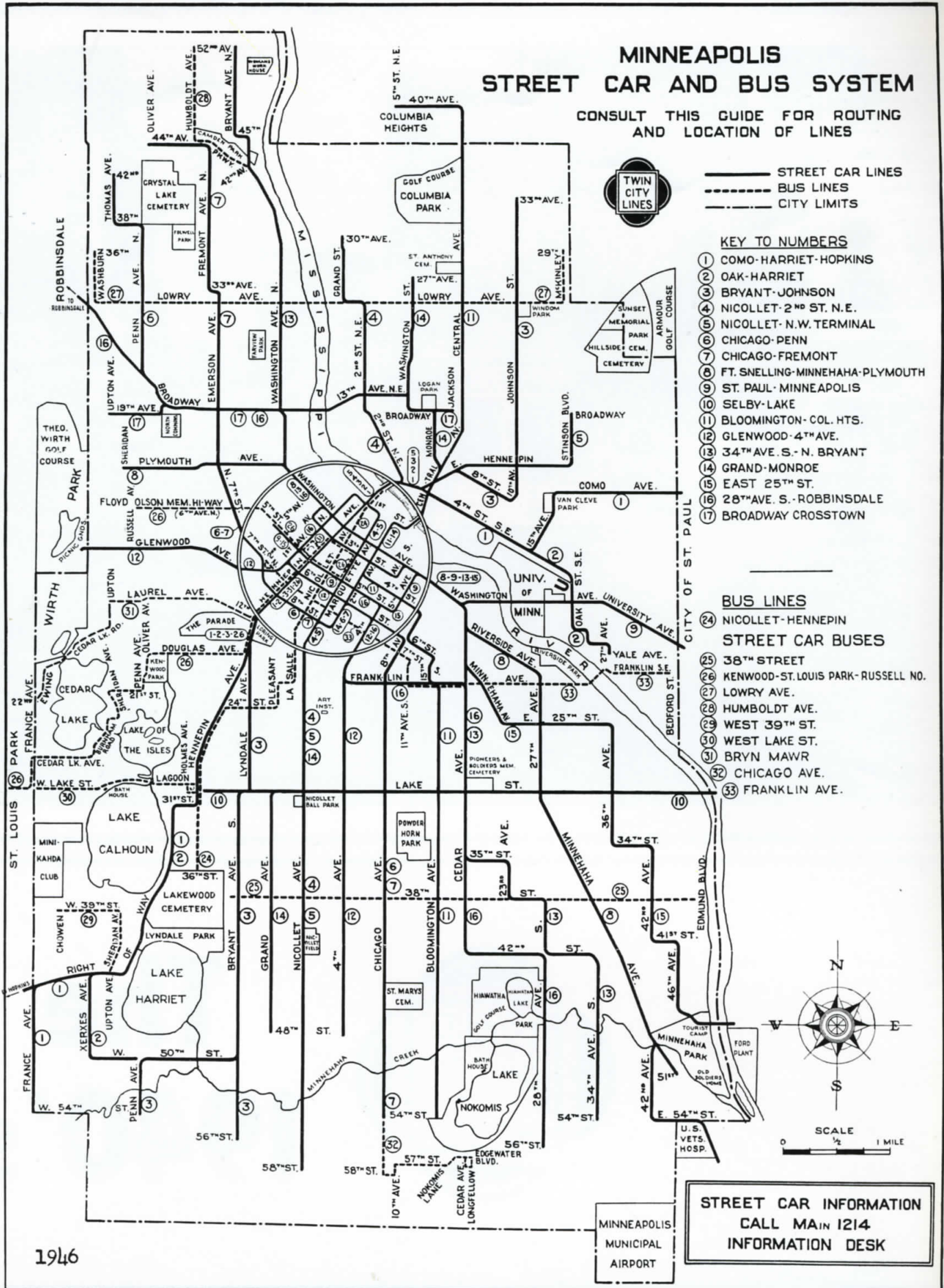
- 1 COMO-HARRIET-HOPKINS
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- 5 NICOLLET-N.W. TERMINAL
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STREET CAR INFORMATION
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The 1940's

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The Minnesota Transportation Museum, Inc. is a non-profit educational corporation organized in the State of Minnesota in 1962 to preserve and communicate to the public the experience of Minnesota's surface public transportation history. It operates the Como-Harriet Streetcar Line and the Minnehaha Depot in Minneapolis, the Jackson Street Roundhouse in St. Paul, the Osceola & St. Croix Valley Ry. in Osceola and the Steamboat Minnehaha in Excelsior.

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Front cover: The bustling corner of 7th & Hennepin in 1945.
Minneapolis Transportation Department collection.

Inside front and rear covers: Streetcar company route maps.
Russell Olson collection.

Below: This stylized page border from a 1949 traffic study shows the two downtowns connected by PCC cars.

The purpose of this booklet is to return you to the 1940's, the last decade of really first class public transit in the Twin Cities. Up to that time, the growth of the Twin Cities had been well coordinated with that of its public transit system. Under the civic-minded leadership of Thomas Lowry, his brother-in law Calvin Goodrich, and his son Horace Lowry, Twin City Rapid Transit Co. provided high frequency service to all the built-up portions of the metro area. More than that, it was a well run company, with a reputation for high quality service and self sufficiency. Alone among American companies, it designed and built all its own street cars.

The Twin Cities metro area of 1940 was a very different place than it is today. For starters, the concept of a "metro area" would not surface for another generation. Back then, the Twin Cities meant Minneapolis, St. Paul and little else. Minneapolis was the dominant twin, but the disparity between the two was nowhere near as marked as it is today. The suburbs, such as they were, included traditional freestanding towns that happened to be close to the cities, like Hopkins and White Bear Lake, plus a few first ring communities like South St. Paul, St. Louis Park and Columbia Heights. Few people lived more than five miles from either downtown. The metro population was 845,000, only a third of today's.

There were no suburban shopping malls, office parks, colleges or hospitals. All were located in the city. The two downtowns dominated shopping, employment and institutions. They were supplemented somewhat by retail clusters at major streetcar transfer points such as Snelling & University in St. Paul (Montgomery Ward's Midway store) and Lake & Chicago in Minneapolis (Sears' Lake Street store) and a few outlying employers like the Hopkins plant of Minneapolis-Moline and the South St. Paul stockyards.

The freeway did not exist, and its absence was a major deterrent to sprawl. Driving anywhere meant using city streets, which limited trip length and reduced the automobile's travel time advantage. Not that many people owned cars. In 1940 there was one car for every 3.5 persons, compared to one per 1.5 persons in 1990. Many people never learned to drive. Even though ridership dropped after World War II, 165 million passengers were carried in 1949. Compare that to the 62 million rides provided by the MTC system in 1994 in a service area roughly twice as large.

The Twin Cities of the 1940's were caught in a curious time warp. The boom growth of the 1920's had been stopped cold by the Great Depression and further stalled by World War II. Other than the automobiles and the fashions, a walk down any street would reveal little change in 15 years. The well maintained yellow streetcars rolled on seemingly unaffected by the passage of time.



A BRIEF HISTORY OF TWIN CITIES TRANSIT

Urban public transportation was an invention of the industrial revolution, which created cities too large to traverse on foot. The average urban resident owned neither a horse nor carriage. First came horse drawn omnibuses. These were soon usurped by horse drawn streetcars. Horsecars, as they were known, traveled on rails, which gave a much smoother ride than an omnibus bouncing over cobblestones. They could be built to hold more people, yet were much easier for horses to pull, especially in the muddy conditions that prevailed at that time.

Separate horsecar companies were founded in St. Paul and Minneapolis. The St. Paul City Ry. opened its first line on 4th Street in 1872. The Minneapolis Street Ry. ran from Dinkytown to downtown in 1875. By 1889, 67 miles of horsecar line had been built in Minneapolis and 53 miles in St. Paul. The network of lines extended two or three miles from each downtown, but the cities were not yet connected.

Despite the advantage of steel wheel on rail, the cars were still horse powered, and horses were a problem. Up to seven were required to keep a single car in service all day. They produced epic quantities of manure. They were slow, couldn't handle steep hills and were subject to disease.

Around the country, inventors experimented with mechanical means of propulsion, and the Twin Cities hosted several of these attempts. The most reliable power of the era was steam, widely used on trains and boats. However, it didn't work well in an urban environment, generating soot and hot embers and frightening horses. Even so, steam powered trains ran from Minneapolis to Lake Harriet, Minnehaha Park and Excelsior from 1879 to 1891. Another steam line briefly ran from the east side of St. Paul to North St. Paul during 1890-92.

The cable car was invented in San Francisco in 1873. An unpowered streetcar used a device called a "grip" to grasp a moving underground cable through a slot in the pavement. During its brief heyday, which ended by 1900, cable cars ran in many large American cities. In St. Paul, two lines were built to overcome steep hills, on Selby Avenue from 1887 to 1898 and on East 7th Street from 1889 to 1893. Cable car materials were purchased for Minneapolis, but the lines were never built. Though reliable and clean, the underground

cable system was immensely complex and expensive to maintain. Cable cars quickly disappeared, except for San Francisco where they survive today as a civic tradition and tourist attraction.

Electricity proved to be the answer. An experimental line ran unsuccessfully on Marquette Avenue in 1885 and 1886. In 1887 an inventor named Frank Sprague mastered electricity, and made a crucial mechanical breakthrough in how the motors drove the wheels. In 1889, the independent Stillwater Street Railway became the first Minnesota electric line to apply Sprague's inventions, which were sweeping the country. By 1891, the entire Twin Cities system was electric except for the two cable lines.

Unlike the streetcar systems in many other cities, the local companies benefited from an extremely stable, long term corporate ownership. Thomas Lowry was an officer of the Minneapolis Street Ry. from its incorporation. He purchased a controlling interest in MSR in 1877, and in the St. Paul company in 1884. The cities were physically connected when the University Avenue line was completed in 1890. In 1891, he merged the two companies to form Twin City Rapid Transit (TCRT). The Lowry family personally ran the company until 1931 and corporate continuity lasted until purchase by the Metropolitan Transit Commission, a government agency, in 1970.

The streetcars expanded along with the metro area. Lowry used them as a tool to develop his considerable real estate holdings, which included much of St. Louis Park and Columbia Heights. Track was added until 1947.

At its peak, the company operated 524 miles of track stretching from Stillwater and Bayport on the east to Deephaven, Excelsior and Tonka Bay on the west. TCRT built its own fleet of Lake Minnetonka steamboats which met the streetcars. For a brief time the transportation empire encompassed the Big Island amusement park and Lake Park Hotel on Lake Minnetonka, Wildwood Amusement Park on White Bear Lake, and most of the buses and taxi cabs in the cities. Independent streetcar companies reached Anoka and Hastings, using TCRT track inside the city.

Motor buses appeared in 1921. Small and uncomfortable, their use was restricted to light duty services such as long suburban routes, crosstowns, expresses and short shuttles from the ends of the streetcar lines. Not until 1938 did they replace streetcars on any

full service city routes. In 1940 buses carried 9 percent of the riders. This rose to 23 percent by 1949.

The streetcar was the dominant mode of Twin Cities transportation until 1920. Its decline began with the coming of mass produced automobiles. The Great Depression of the 1930's worked both against and for public transit. It killed most of the small city streetcar systems, as well as the more exotic and lightly patronized portions of the big city systems. In Minnesota, every small city trolley was gone by 1938, and Duluth's cars quit in 1939. In the Twin Cities, the depression put an end to 16 percent of the track miles including the long suburban lines to Lake Minnetonka, White Bear Lake, Stillwater and Anoka, as well as a few light city routes such as Kenwood in Minneapolis and East 4th Street in St. Paul.

On the plus side, the depression stopped suburban development cold. For 15 years, from 1930 until the end of World War II, autos were either not affordable or not available. Even if you owned one during the war, gas and tire rationing prevented you from using it much. Transit ridership, which had peaked at 238 million in 1920 and slumped to 100 million in 1933, rebounded to 201 million in 1946. In 1949, 36% of all trips in the metro area were made on transit, compared to less than 5% today.

With the end of the war, the tremendous pent up demand for new housing and automobiles set in motion the suburbanization of the Twin Cities. Even so, ridership held at a very respectable 165 million in 1949. Twin City Rapid Transit responded by buying new streetcars to begin modernizing its fleet, by converting a few additional streetcar routes to bus, and by planning some consolidation of its facilities. The company's management, headed by D.J. Strouse, still believed in serving the public well. Because of the PCC purchases, the fleet had actually grown 18 percent to 828, plus the buses, housed at six streetcar barns and two bus garages. It still maintained the sprawling Snelling Shops complex, where every wood car was torn down and rebuilt every five years.

That benevolent attitude was shattered in November 1949, when a group of outside investors took control of the company in a bitter proxy fight. Because of the high cost of maintaining its tracks and overhead power system, streetcars were more expensive to run than buses. There was money to be made from scrapping the cars and

The 1940's

Right: Passengers board at 9th Avenue in Hopkins for the ride back to Lake Harriet and Minneapolis. The streetcar will climb up to the S-curving trestle over the Great Northern, Minneapolis & St. Louis and Milwaukee Railroads.

Below: This photo, taken on Selby Avenue just west of Western, was intended to illustrate the unsafe use of an umbrella. The Angus Hotel survives as the Blair House apartments. Minnesota Historical Society collection.



infrastructure and substituting a lesser service, and that is exactly what happened. Ridership dropped dramatically. By 1954 it was down to 86 million and the streetcars were gone.

Twin City Rapid Transit survived until 1970, when its assets were purchased by the Metropolitan Transit Commission. Transit was becoming unprofitable, and the transaction was part of a national movement to preserve transit systems through government ownership.

Many remnants of the streetcars remain, if one knows where to look. Many of today's bus routes travel the same streets and bear the same names. The Snelling Bus Garage incorporates two of the 1908 shop buildings where streetcars were built. The 1914 North Side Station, 1891 East Side Station and the 1885-vintage 3rd Avenue N. horsecar barn-general office still stand, used for other purposes. A modern bus garage occupies the site at 31st & Nicollet where a transit facility was first opened in 1879. The Main Steam Station streetcar power plant by St. Anthony Falls now serves the University of Minnesota. Around the city are scattered overhead wire poles and former power substations. Miles of track lie buried under layers of asphalt, and poke through when the pavement deteriorates.

And of course the Minnesota Transportation Museum's Como-Harriet Streetcar Line preserves streetcars 78, 265, 322 and 1300, along with a mile of original right of way.

TCRT SYSTEM OVERVIEW

The streetcar system was organized around routes and stations (streetcar barns), just like the present day metro bus system. Each station housed a group of streetcars (and sometimes buses), which operated specific routes. While some routes ended at one of the two downtowns, most were "through routed", meaning that they began at one end of the city, passed through downtown, and ended at the other end of the city. This pattern has persisted and some of the routes, such as Chicago-Penn-Fremont and Selby-Lake, survive today. The stations were:

-Snelling Station, at Snelling Avenue & University Avenue in the St. Paul Midway (See page 26).

-Duluth Street Station, at Duluth Street & E. 7th Street on St. Paul's East Side.



-East Side Station, at University Avenue & 1st Avenue NE in the Old St. Anthony area of Minneapolis.

-Lake Street Station, at Lake Street & 21st Avenue in south Minneapolis (see page 16).

-Nicollet Station, at 31st Street & Nicollet Avenue in south Minneapolis.

-North Side Station, at 26th Avenue N. & Washington Avenue in north Minneapolis.

Unlike today, streetcars ran 24 hours a day. The last all-night "owl" bus was eliminated in 1965. On the major routes, service was extremely frequent, with a car every minute or two during rush

hours. The expression, "running like streetcars" meant running at very close intervals. Because they ran so often, transferring between routes was always convenient.

The streetcar fleet in 1940 consisted of 704 streetcars and 131 buses. Of these, 669 were the heavy wooden standard type designed and built in the company shops between 1905 and 1917. When built, all were designed to be operated by a two-man crew. The motorman sat up front and had little contact with passengers. The conductor stood in the rear of the car, where all passengers boarded and alighted



One of TCRT's powerful snowplows.



TCRT's three basic car types, prior to the delivery of the PCC's.

Top left: A two-man standard "gate" car. Passengers boarded through the rear gates and alighted through the gates and the single-stream folding front doors.

Top right: A standard car rebuilt with folding doors front and rear for "one-man" operation.

Right: A lightweight, built in the 1920s.

through manually operated wire gates. In order to reduce operating costs, the company rebuilt 78 percent of the fleet (553 cars) for "one man" operation from 1931 to 1937. The rear gates were replaced by air-operated folding doors at the front and rear of the car. Preserved car 1300 is a typical example.

Thirty-five cars were of a lightweight design intended to reduce operating costs. They were built at Snelling Shops from 1916 to 1928 141 modern PCC cars were delivered in 1945-48 (see page 23). Preserved car 322 is one of them. Developed in the 1930's, the PCC was the streetcar industry's last major effort to compete with the automobile. Fast, quiet and comfortable, they were a major improvement over the old cars. Because of its conservative management and tradition of self sufficiency, TCRT was the only large North American system never to own a steel car before buying PCC's. When the first one arrived, the wood fleet averaged 32 years old.



There were also 68 non-revenue or "work" cars. Ranging from snow plows (TCRT's franchises required it to plow the streets it used) to rail grinders, they served a wide variety of specialized purposes. All of them had been built at Snelling Shops.

Twin City Lines began running its own buses in 1921 and purchased a competing company, Twin City Motor Bus, in 1926. Before the wholesale conversion from streetcars, buses filled several niches. They ran the long suburban routes, such as Stillwater via Lake Elmo, and Glen Lake Sanitarium via Excelsior Boulevard; light city crosstowns such as Lowry Avenue and

38th Street; intercity expresses such as University Avenue and Marshall-Lake Street; and short shuttles that fed the outer ends of the streetcar lines, such as the W. 39th Street shuttle that met the Como-Harriet line at 43rd and Upton. Loads on all these routes were light, so buses were smaller than the streetcars. It wasn't until 1948 that TCRT purchased buses with comparable capacity.

Twin City Lines generated its own electric power at a steam power plant and two hydro plants located near St. Anthony Falls. Because of the wide area to be covered, power was boosted by a network of 14 substations.

It took a work force of 2500 people to run the system. Headquarters was a two-story office building on the corner of 11th & Hennepin in downtown Minneapolis. Although operated as a single company, the Minneapolis and St. Paul systems were corporately distinct. The St. Paul side of the system has always been somewhat separate, to the point of having its own administrative office building, at 11th & Wabasha Street.

On New Years Day 1940 the streetcar fare was 10 cents (7½ cents if you used a token), unchanged since 1929.

RIDING THE CARS

What was it like to ride the cars, to depend on them for all your daily transportation? Members of the Minnesota Transportation Museum describe it in their own words.

-Bill Graham

As a young child growing up during and after World War II, I regarded streetcar riding as what big people did when they were about something important. One often could wangle an invitation to go along on these events, a visit to the doctor at the downtown

Medical Arts Building, a visit to a merchandise expo at the St. Paul Hotel, or tagging along with my grandfather as he visited the pool halls down on The Avenue to check up on his friends from the "old days" in North Dakota.

I already had memorized everything one needed to know about the Oak - Harriet line where we always began our travels. The retaining wall behind St. Thomas Church that seemed like something found only in very big cities, the fact that the car passed awfully close to the substation building as it slowed for Upton Avenue, the mysterious loop track opposite the Linden Hills Fire Station which no cars ever seemed to use, the darkness under the Lake Harriet Station platform shelter as the car passed - I carefully noted all these details while riding the cars.

There were the two noisy joints in the continuous welded rail northbound approaching the cemetery curve that sounded a rapid fire "ba-Bunk, ba-Bunk" when the motorman was making up time. I never missed them as the wind whipped through the open windows. At the switches to the Bryant-Johnson line on Lowry Hill, (see page 28) the car would vibrate loudly on the

corrugated track where heavy brake applications were made. I knew the store fronts along Hennepin Avenue, and I thought about what they might be selling inside. The atmosphere on a streetcar headed downtown seemed quite sober and businesslike to a small kid expected to behave himself. But it was so entertaining, an event to be savored and thought about afterward.

Streetcar men, and sometimes streetcar women, were an interesting breed for a youngster. Each had his or her own style of dress and demeanor, some approachable, some crabby but sometimes friendly. The conductor seemed never to talk to the motorman, and I wondered if they knew each other. One motorman who looked especially ancient (and crabby) always chewed tobacco with tiny drools at the corners of his mouth. He would rock back and forth on the motorman's stool, from time to time leaning over to spit through the switch rod hole in the floor. He never missed, and always slammed on the brakes just before every stop.

My grandfather invariably walked down to Xerxes Avenue to ride the cars even as his own '31 Chevrolet sat parked in the back yard, but he didn't like

A Como-Harriet car rolls down the Edina side of France Avenue between 50th and 51st Street, towards its terminal at 54th. Minneapolis Transportation Department collection.





A Como-Harriet car unloads at the Great Northern Station on Hennepin Avenue. The site is now occupied by the Federal Reserve Bank. Minneapolis Transportation Department collection.



streetcars or streetcar men very much. Streetcars were a necessary public convenience that needed to be plentiful and cheap. He said the streetcar company was peopled by miscreants who liked to cut service and raise fares. He would go on at length about how cars should come by our 48th Street stop at least every 10 minutes during the midday, oftener in the evening, and that the last fare increase from 10 to 11 cents was an outrage.

One evening as he held onto the strap returning from downtown, carrying a shopping bag of meat from the Great Northern Market, the jam-packed car gave a violent jerk that dislocated his shoulder. He was livid, of course, but the company paid his doctor bill after several especially loud and lengthy phone calls. Grandpa saved his choicest language for the streetcar company. He took to handing the motorman or conductor a dollar bill and asking for change on the 11 cent fare. They would grumble as Grandpa glared back, daring them to give him the excuse to say what he thought about the streetcar company.

I, on the other hand, loved streetcars, built crude little models of them in the basement, imagined how they would look running on streets that had no tracks, built streetcar barns in the sandbox, paid careful attention to all their peculiarities, and rode them every chance I got. They entertained us at picnics in the Lake Harriet Glen by racing by every couple of minutes.

Parents fretted as we crawled under the fence to place rolls of caps on the rail. A moaning whistle told the neighborhood that a motorman wanted someone to move his car parked too near the track at 50th and Xerxes.

After we moved to Bloomington in 1953, I would ride George Knapp's blue suburban bus to Lake Street and take the Oak-Harriet car out to my grandparents' home. All seemed as it always had. The women in their hats and face veils, the men in coats and ties, and the jammed rush hour trippers lent the illusion that the Oak-Harriet car would always come for anyone who waited on the corner. Yellow streetcars were part of the golden afternoon like lemonade, jaw-breakers and cap pistols. I knew, of course, as everyone knew, that the last car line in town would be gone by the next spring, and that surely our lives would go on regardless. My brother and I took our last ride a few days before June 19 on steel-side car No. 1326, noting that it would be our last and solemnly pledging always to remember the car number. The red and yellow buses seemed inevitable, maybe even a sign of the progress that everyone hoped for in 1954.

-Robert Cumbeys

I was an almost everyday rider on the Interurban Line (St. Paul to Minneapolis via University Avenue) while attending the University of Minnesota in 1943 and again in 1948-49. My customary ride started on the Minnehaha-Fort Snelling line.

I transferred at 15th & Washington, also called Washington Square or Seven Corners. Having 8 o'clock classes, I always rode during the heig8eadway between cars was only a minute or two and the cars were loaded to capacity, particularly during the severest winter weather.

I remember one particularly stormy winter morning in 1943 when the snow was deep enough to cause the cars to fall behind schedule. Our northbound Minnehaha-Plymouth car arrived at Washington Square okay, but there were throngs of people already on the island between the tracks curving off Cedar Avenue. But there were no "To St. Paul" cars in sight. On the other hand I counted 12 westbound "To Minneapolis" cars going by one right after the other.

The starter at Washington Square flagged down one of them, gate car #1358, unloaded its passengers, and had it back across 15th Avenue S. and head onto the eastbound Interurban track.

The car changed its signs to "Univ. to Snelling" and we clambered aboard for our ride to the campus. My 8 o'clock class was at Folwell Hall on the other side of the campus and I was afraid I would be late, but it turned out my instructor was on the same car with me.

I remember another bitterly cold winter morning vividly. It was bright and sunny, but windy and subzero. The usual throngs were on the Washington Square island when a St. Paul car pulled up. The crowds were so heavy I could get up only to the bottom step on the open back platform. The gates closed behind me and we were off.

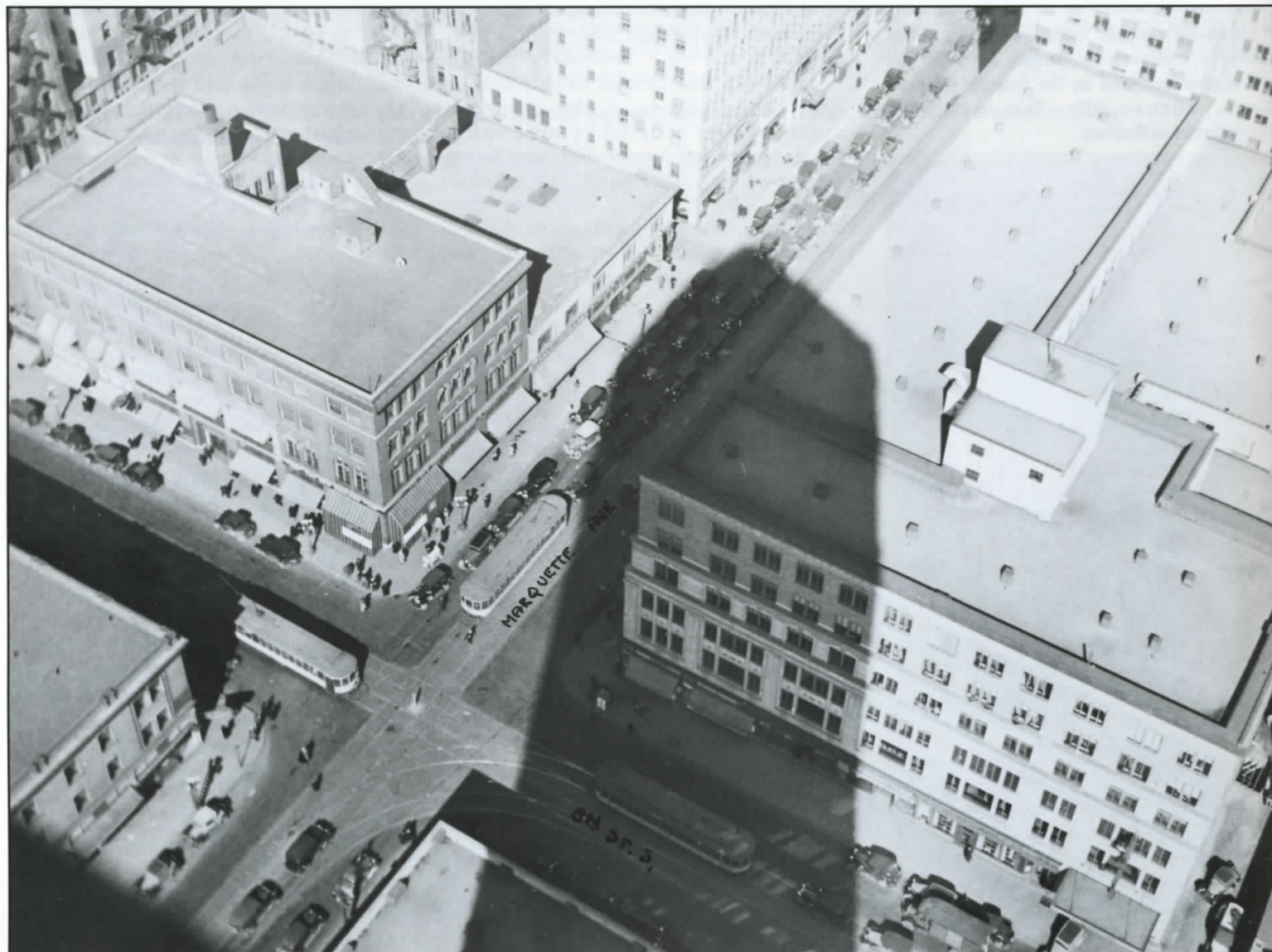
The cars always moved at restricted speed (about 10 mph) across the narrow, high Washington Avenue bridge over the Mississippi River, which must have been about three blocks long. How the wind did howl as we crawled slowly across. The conductor never did get my transfer that morning.

Immediately following the war, the return of GI's like myself swelled U of M enrollment. Traffic on the Interurban line must have reached record proportions, and this stretch of line must have had one of the highest traffic densities in the TCRT system. TCRT responded by running 14 or more "extras" during the morning rush hour and seven or more during the afternoon rush hour. There were over 70 cars on the line at once, or one for each city block.

-James Grunnet

I was born in 1930 in Minneapolis. Since my father did not own a car until 1939, streetcars were a primary source of transportation for me and the family until 1954. For the first three years of my life we lived at 46th Street and 4th Avenue South near the end of the 4th Avenue line. When I would wake up in the middle of the night, my dad would carry me to the front window to watch the streetcars go by.

The shadow of the Foshay Tower looms over the intersection of 8th & Marquette. Minneapolis Transportation Department collection.





In 1933 we moved to Morningside about a block west of the Westgate Theatre (France & Sunnyside). The favorite place to wait for the streetcar was inside the front door of Lars Belleson's Country Club Market (now the Sunnyside Super Valu). We could see the Como-Hopkins car coming far enough in advance to run across the street. For the first six years we lived there, Dad worked at Purina Chows at 38th and Hiawatha. This entailed riding the Como car to Lake Street, (see page 35) the Selby-Lake car to Bryant Avenue, the "Bryant to 56th" car to 38th Street (see page 33) and then the 38th Street bus to work. The whole process consumed about an hour in the best of circumstances. After Dad bought our '39 Chevy he drove to work and got a B ration card because he picked up people on his way.

I still rode the cars regularly to swimming lessons at the downtown "Y". In my early teens, there were a few streetcar parties where we would ride all over the system for a couple of hours. My most intensive riding began in 1948, when I registered at the U of M. Most of them had electric heat, but occasionally I would find an old wooden car with the motorman stoking up a coal fire. The inside of the car would be ice cold and reek of coal smoke. The ride to the "U" took about 45 minutes. The most exciting part of the trip was the fast run

A Glenwood-4th Avenue car passes Central Lutheran Church and Vocational High School at 11th Street & 4th Avenue South. Russell Olson photo.

A northbound Bryant-Johnson PCC car crosses Minnehaha Creek on Penn Avenue at 53rd Street. This was a rare section of single track.



between Lakes Harriet and Calhoun. You always hoped nobody wanted to get off at 32nd Street, so the car would get a good run going over the 36th Street bridge, (see page 29) past Lakewood Cemetery and on to Lake Harriet. We always guessed they must be going 50 mph (streetcars lacked speedometers).

-Byron D. Olsen

I grew up in the '40's and my means of transportation before I obtained a driver's license were bicycle and streetcar. And in the winter you couldn't ride a bicycle. I lived in St. Paul. When

my friends and I went to the movies or shopping, it was usually to downtown by streetcar. The line we traveled was the Selby-Lake, which ran the full length of Lake Street from Hennepin Avenue, across the Lake Street bridge to Fairview Avenue. It then continued down Selby to the St. Paul Cathedral, where it descended into its own private tunnel and emerged into the hustle and bustle of downtown St. Paul. Downtown really did hustle and bustle in those days.

It cost two fares to go from one city to the other with one exception: if you came from Minneapolis and crossed the

Lake Street bridge, you could get off at the St. Paul River Road without an extra fare (and vice versa). The fare during World War II was a dime or six tokens for 45 cents (seven and one half cents). Even at those low fares, many crossing the city line might get off at the bridge and walk several blocks inland to save the second fare.

The streetcars were generally very well maintained. The company made few attempts to cosmetically modernize

A northbound Chicago-Fremont car on 8th Street crosses 1st Avenue N.
Minnesota Historical Society collection.





Dinkytown hasn't changed a great deal. The Varsity Theatre sits closed, but Gray's Drugs continues to serve U of M students. Minnesota Historical Society collection.

them, so the seats remained rattan and the woodwork was still cherry stained and varnished. In the winter the cars had storm windows and good heating, so they were warm and cozy.

Twin City streetcars were large compared to those in other cities, and anything else on the street. Sitting at a window seat made one feel important and above the hurly burly of traffic. The windows were large and descended mysteriously into pockets under the window sill. There was no partly open. It was all or nothing.

Twin Cities streetcars were capable of accelerating as fast as then current automobiles. If let run on private right of way or on University Avenue late at night, speeds of 50-55 mph could be attained.

The Selby-Lake line had a couple of unique features that I experienced many times, the Lake Street bridge (see page 32) and the Selby tunnel (see page 26). The bridge was old and decrepit even in the '40's. Trucks were not allowed on it, and streetcars were required to operate at a snail's pace.

The space between the side of the streetcar and the curb was almost too narrow for an automobile to pass.

At the top of the steep tunnel descent, the motorman would set the brakes and step away from his seat, open the electrical cabinet behind him to his left and turn on the interior lights so that everyone could continue reading the Pioneer Press or whatever. Then he would release the brakes with a hiss of air and inch over the precipice. From there to Seven Corners it was slow with the brakes partly applied the entire way. Inside the tunnel darkness and excitement reigned. There was insufficient room for a pedestrian to clear a streetcar except for several safety portals cut out of the tunnel wall. We all speculated how terrible it would be to get caught away from one of them. Exiting the tunnel, downtown St. Paul was spread before us with its tall buildings and teeming streets. In those days, there were few empty or parking lots. Seven Corners was a warren of car dealers: Nash, Pontiac, Joy Brothers Packard, Young Lincoln Mercury, Holt

Chrysler Plymouth. From there the car proceeded down Fourth Street to its terminus beyond the St. Paul Union Depot.

We had many destinations in downtown. There were hobby shops we frequented to buy model airplanes and trains. There were movie theaters galore where we often went on Saturday morning or afternoon. But the most fascinating place to me was the St. Paul Union Depot. Not only was it redolent of the excitement of train travel, it housed the Twin City Model Railroad Club in one of the big former waiting rooms.

When we returned to the car stop to go home, we had to be careful not to get on the wrong streetcar. It could be a Grand Avenue car, which was no good for us. A "Selby to Snelling" or "Selby to Prior" didn't quite do it, although the Prior cars did get us back to our grade school. We needed a "Selby-Lake" or "Lake to 22nd".

Because the Prior wye was located one block from our school, a streetcar was frequently chartered to take us to the circus at the St. Paul Auditorium or



A South St. Paul car on Wabasha Street at 5th Street in downtown St. Paul. Minnesota Historical Society collection.

other events downtown. When the event let out, we had to choose from a whole line of cars waiting on Fourth Street. The car couldn't wait for stragglers because it was on the main line and had to go when its turn came.

The Selby-Lake was a two-man line until near the end, thus we frequently got gate cars assigned. If it wasn't too cold, it was fun to stand out on the open back platform and savor the noise and rumble as the car coursed its way through traffic. The streetcars were driven aggressively and generally went fast at every opportunity. When a streetcar accelerated across a junction with another car line, the thunder and clatter from the wheels and the sparks and arcing from the trolley pole made very clear that here a formidable conveyance indeed. I have many recollections of streetcars standing tall above the traffic and seeming to elbow their way along, shoving (figura-

tively speaking) autos aside as they proceeded on their imperial way.

What was so fascinating about a streetcar? The efficiency and silent power were part of it. Here was a huge railroad vehicle running down the street with other traffic, yet with its own guidance system and drawing its power from the overhead wire.

I remember the new streamlined PCC cars that arrived after World War II. They were a collective effort by the street railway industry to design a truly modern streetcar with no links to past technology. As a result, they were extremely smooth and quiet, with fast acceleration, smooth braking systems and a velvet ride. I remember them streaking down University Avenue late at night. The old cars were all clatter and rumble, while the PCC's were muted, clicking and humming.

WORKING THE CARS

Here are the memories of Minnesota Transportation Museum members who used to operate the streetcars.

-William J. Olsen

In the Spring of 1943, I heard they were hiring over at Snelling Station. I was only 15 years old but I got up enough courage to apply. On July 28th I found myself in training at East Side Station as a conductor. After a few months I returned to high school at De La Salle on Nicollet Island and found I could still take both a morning and evening rush hour run from nearby East Side.

There was always a hassle around the super's cage where we all "plugged in" on the assignment board. If someone missed, there was always a quick

The 1940's

scramble to cover the one-man runs. We high school student conductors would sneak a motorman's spot if we could. I waited for a year to try it and got my Como-Harriet car out to the 44th Street loop at France Avenue before the inspector caught up.

When they pulled the heater fires out early in 1944 to save coal, I hung a "This car heated" sign on the outside of our electrically heated gate car.

The worst run, always left to new men, was #66 that somehow hit all the theater closings on Saturday night and caught the last ride for sailors avoiding AWOL/curfew at the University. We often had head counts exceeding 200. Then totaling up the cash forced me to miss the owl car home, which meant sleeping overnight at the station. Sleeping upstairs at East Side was nothing short of traumatic. There were no sheets, just gray blankets on army cots thoroughly stained by the snooze chewers. The old wooden barn would shudder as each car rumbled in or out, and the thought of all those trolley poles still on the wire, with the fire warnings, made deep sleep impossible.

Our pay was 66 cents per hour with all the free rides we wanted.

-Ken Johnson

In July 1946 I was a motorman working out of the Duluth Street Station in St. Paul. My first and only experience driving a gate car came when I had to practice the route from downtown St. Paul to the State Fair Grounds. I would continually bang the rear gates after stops. I just couldn't pick up the rhythm. The gates were operated mechanically; a large handle in the cab controlled rods that ran the length of the car to open and shut the gates. The old conductor came up to the cab and remarked that if I didn't learn how to close the gates properly, I wouldn't have a job. I was 23 at the time and couldn't care less. There was plenty of work around with the war over.

-Earl Anderson

On a winter rush hour evening of 1947-48, I was stationed as a street fare collector on the corner of 7th & Wabasha in downtown St. Paul. For some reason there had been over a half hour interruption in eastbound service on the St. Clair-Phalen line. The waiting riders were becoming quite restless, for they were used to service of less than ten minutes headway during the rush hour. As the delay lengthened,

they sent their delegates across the street with increasing frequency to complain to the Starter (Inspector) and to demand that he do something about it.

At first, the starter confined his efforts to looking for pull-in cars of the Minneapolis-St. Paul Interurban line, and he asked the trainmen of several such cars if they would run a fill-in. Each time the crew refused when asked. Post war crews were asked; pre-war crews were told.

As the complaints became more frequent and more vocal, the Starter began making the same request of regular Interurban crews, and again he received refusals. That was real desperation—to even think of pulling an Interurban from a scheduled run.

Finally a Como-Harriet gate car came along with its pull-in "East Mpls. Station" sign and the same request was made. Both conductor and motorman responded that they wouldn't mind at all except they didn't know anything about St. Paul routes. I was asked if I would ride along to show the motorman the route and I said OK.

The front destination sign was rolled to blank. As soon as I called out "Payne Avenue", the cold passengers swarmed across the street to the car so we had standees before we swung eastward onto



A Hamline-Cherokee car southbound on Rice Street at University Avenue. Minnesota Historical Society collection.

7th Street from Wabasha. At each downtown corner, I stepped down from the front steps and announced the destination. We probably set some record for a passenger count since I was squeezing them in through the front door while the conductor was doing the same through the rear gates.

I pointed out the route to the motorman and called out the street names to the passengers. The riders seemed more jovial than annoyed. The crew seemed to be enjoying themselves too. When we arrived at Maryland Avenue and Duluth Street, the motorman wanted to continue up the single track to Kennard just for the sightseeing, but I talked him out of it. We backed around the wye and rolled the destination sign to "East Mpls. Station".

The trip back to downtown was uneventful. I directed them onto the Cedar Loop track and left the car at 9th and Wabasha.

Lake Street Station was located on Lake Street between 21st and 23rd Avenues, where the Hi-Lake Shopping Center is now. Lake Street, Nicollet, North Side and Snelling Stations were all built to a common design using standard materials. The offices were at left, and the six doors opened into the shop area. Streetcars and buses were stored in the open yard at right.



- Bob Schumacher

Bob Schumacher was a long time museum member and motorman who ran streetcars from 1947 to 1951. He was interviewed by Aaron Isaacs.

AI: How did a typical day start?

RS: When we walked in the station office we plugged in our time and the station clerk was always watching the plug board to make sure that no one was missing. We were to plug in perhaps 15-20 minutes ahead of time so that they would know we would leave the carhouse on time. We'd get set up with our money changers loaded properly; we were required to have \$5 in change because we made change and sold tokens. If we didn't have enough we would go up to the cashier and buy whatever we needed. We picked up transfers, and we were assigned transfers by serial numbers in those days. You had to account for them and return the unused transfers. We would know our run in advance unless we were working the extra board; then you'd go look up your piece of work, write it down on a piece of paper, these were your time points, and go out to the car and prepare it for operation.

You had to take your fare box readings of course; in those days you had to account for that. You would turn on the air, unless the shop already had the air pumped up, turn on the lights, make sure that everything was O.K. on the car, the doors were working properly, and then put the reverse lever to the forward position and go. Then

Opposite page: Trippers pull out of Lake Street Station for the afternoon rush hour. Minneapolis Public Library collection.



we would leave adequate time to get out on the street, to leave the end of the line or downtown exactly on time.

AI: Did you mostly work one-man or two-man cars?

RS: Most of the time one-man; the only two man line we had out of our station was the Nicollet Avenue line, and except for the first couple years, we were basically two-man on that line except in the evening when we would go to one man.

AI: Which line did you work the most?

RS: I suspect I worked all four lines out of our station about equally; although most of my memories are of the Bryant-Johnson line. Bryant-Johnson probably was one of the easier lines to work since it was so long. If you made 2 ½ trips you had done a day's work. We'd pull out Nicollet to Lake Street to Bryant Avenue at which point we would go south. We had several possible terminals out there; there was a wye at 38th Street (see page 33) for the trippers in the rush hour because we had one minute service from 38th Street north for a period of time. There were other cars that wyeed out at 50th & Bryant. If we went out further there was a wye at 56th & Bryant after going over that famous Minnehaha Creek gauntlet

track bridge. The "Bryant-to-54th Penn" and "50th Penn" cars turned and went west to Penn Avenue.

Just after you get around the corner going south on Penn, it was single track (see page 11) so we had signals. Nobody entered that stretch of single track from 50th to 54th when that signal was red; that meant that a car was on the block. If the signal was green, and you went through that switch okay, the light would flip and you'd know that you'd cleared the block.

At 54th and Penn we had a wye. You pulled across 54th Street and then backed east into 54th Street going down a steep hill, but if you were careful you managed it okay. At that wye we met a Penn Avenue shuttle bus which ran out to 62nd Street. I had the pleasure of driving that once in a while - sheer boredom.

AI: I heard that there were runaways on that hill.

RS: Yeah, well, there were runaways even on the flat. At 48th and 4th Avenue there was a wye, and you crossed 48th Street, stopped, backed east on 48th Street and that was your layover point. But on one occasion the operator thought he was only at 47th Street. He got the controller wound up and sailed across the street and started

hearing special work under his wheels and realized he was going down 4th Avenue past 48th Street - you could see the wheelmarks in the tar for years!

If a car was wyeing out and it was slippery, they couldn't stop in time and the wheels would go off the end of the track. Usually the wheels would follow the same grooves back so it wasn't that hard to get them back on as long as you had one set of wheels on the rails to get power.

AI: Please explain how electric track switches worked.

RS: There was a contact in the wire and a switch machine located in the street. If you went over that contact with your power off, the switch was always lined up for the straight track operation. If you went over that contact with your controller out about the second notch you would end up with the switch throwing for the turn. Sometimes you would hear operators with their brakes and their controller both on so they wouldn't fly through the contact too fast.

Once in a while an electric switch would not throw and you would have to manually throw it. And you occasionally had switches that were never electrified and you had to throw them manually. You could throw them





Streetcars sometimes jumped the tracks with devastating results. In this case, small boys jammed stones into a switch and the car took out the front of a grocery store.

from inside the car by sticking the long switch rod through the special hole in the floor. But I found it much more convenient to take the short switch rod and go outside and flip the points there. Some of those points didn't flip easily; they were spring loaded so they stayed in position.

AI: Were there many spring switches in the Twin City Lines system?

RS: Basically the spring switches were located at wyes where a car always made the same movement. Also, the trolley frog had a spring in it so that the pole went back around the curve into the wye without the problem of having to watch that wheel and see which wire it took. This is because so much of our operation was one man and we didn't have the luxury of having a

conductor back there holding the rope and pulling it over to the side that we wanted the wheel to take.

AI: Was it hard to stay on time?

RS: Twin Cities Lines had a very fast headway or schedule. We were required to cover two long city blocks in a minute; and usually we had to stop at every corner because there were so many passengers. Typically from 50th Street to 38th Street you had six minutes and you needed every bit of it. The shorter blocks, which you would find in east-west streets, usually the schedule required you cover three of those blocks in a minute which sometimes produced problems. We had gate cars that didn't have a field shunt and you couldn't get the higher

operating speed and they were not able to cover three short blocks in a minute.

One of the problems was 4th Avenue, I think it was the fastest scheduled line in the system. We had to go from 48th to 38th Street in four minutes. We had to stop at almost every corner and pick up passengers. Those were the days when streets like Bryant, Grand, Nicollet and 4th Avenue did not have any stop signs protecting the main streets. When you came up to the intersection you had to stare pretty hard to make sure there wasn't someone sailing through. The minute you saw it was clear, you would wind it up again, and I want to tell you, making that in four minutes was not easy - even with a PCC you had to push.

AI: How about during winter?

RS: Well, the only time you have problems with traction with streetcars is if the snow is dry. When the snow is dry, it had a tendency to get in the flangeways on city track and lift up the wheel; just a slight lifting of the wheel means you have lost a little bit of your traction so that there is a tendency to spin the wheels. They thought the PCC's couldn't handle our winters. When they found out they could handle them better than the big cars, that's when they got interested in buying them. On wet snow we had better traction than the automobile or bus.

Leaves in the fall were a problem! We always kept ample amounts of sand in the car and we dropped sand every time we came to a point of having to stop, just to be sure we weren't skidding 'cause you could slide your wheels and get a flat spot. It gave a bad ride, it was annoying to the operator. Something that was as bad or worse than leaves were elm seeds in the spring. They were very slippery and caused us the same kinds of problems. One of the things the company did is they ran sand cars; they would coat the rails with sand so you would get pretty good traction in the worst periods. I have seen the time

when they dropped so much that the sky lit up like fireworks because the wheels were arcing across that sand.

There were streets with tight clearances. Grand Avenue is rather narrow, and automobiles are parked in front of the homes. So the first trip out in the morning you were escorted by a crash truck which was our wrecker, and any automobiles in the way were very callously moved around the corner or some place so the driver would know next time not to leave the dumb thing on the track. This was particularly a problem in the winter time with snow on the street. We had some real thrills inching past some of these automobiles. You got to be pretty good at telling whether you were going to clear or not. You had to remember that the car might be on ice and you rolling by might vibrate it down into the side of the streetcar which I saw one do. And also the fact that some of our cars were wider than others, even though they looked the same. One time I cleared, and a guy behind me didn't because of he was 2 1/2 inches wider. When cars being parked so they blocked streetcars, it was always the automobile operator's fault. Anytime a streetcar hit a parked

automobile, it was my understanding that the driver would get two tags, one for blocking traffic and one for parking illegally.

AI: Speaking of what drivers could and couldn't do, explain the "No Passing" law.

RS: People had to step off the curb and board in the middle of the street, so as long as those doors were open, cars couldn't pass, unless there was a safety zone. A lot of our streets downtown had safety zones (see Front Cover); they were really marked out space on the streets with a portable sign set up that said "Safety Zone".

AI: How often did the streetcars run?

RS: On Nicollet Avenue during the day the service was usually every three minutes. We had one minute rush hour service on Nicollet north of 38th Street, and sometimes it was even one minute south of there. Of course we picked up the Grand Avenue line at Lake Street and so we had more service. We ran a lot of school extras too. 2nd Street NE had a girls high school and carried a special every day that took them back down to Minneapolis. We had football specials and that sort of thing.



One of four short lightweight cars built for Stillwater local service travels eastbound on 13th Avenue NE at Second Street on the lightly patronized Broadway Crosstown. Russell Olson photo. Minnesota Historical Society collection.

AI: Let's talk about the different kinds of cars and their strengths and weaknesses.

RS: Well, of course, the gate car (see page 6). We didn't have a lot of those, but we used them on Nicollet, and they were for two man operation only, so we used them during the day; anytime we went into one man operation they had to be off the street. The convenience there was that you had a conductor and you can really move people with a conductor. A lot of times the conductor wouldn't do the job and could kill a two man operation real fast. But on heavy lines like Nicollet and Selby-Lake in particular, a conductor earned the money.

AI: Explain how loading worked on a gate car with a two man crew.

RS: Well, the entrance was at the rear gates. There were three gates on our cars because they were the rebuilt jobs, and a conductor would get as many people on that platform as he could possibly get on, get those gates closed, and get the cars going, and start collecting fares. Most people passed into the body of the car, a few would stay on the back platform.

The front door was exit only. When a passenger signaled to get off, the motorman could look back through a window and see that there was a

passenger stepping down into the step well. It was an enclosed step well so it was safe to do it, and then he would allow the person to get off. Sometimes they got off the back gate instead of the front door; that was the thing the conductor watched to help the motorman.

The motorman controlled all gates. That led to a little different type of operation. As you know, on our 1300, which is typical of our one-man, two-man cars, we have a spring loaded air brake valve and we all got into the habit of controlling the valve with our knee; we would put our foot up on the footrest and you could stop a car real nice with that. And, you just had buttons to flip the doors, so it was really convenient and you could handle the controller real easy. In case of the gate cars, everything was manual. There was no such thing as a spring loaded brake valve, there was no deadman on that car at all. You wound up the controller and when you shut off the controller and wanted to open the gates, you moved your left hand off the controller onto the brake valve and your right hand operated the gate and door handles. You would swing them open and you would have a lever that would open the front door if you needed to. Then you would close the gates, move

your hand over to the brake valve, shut it off, and operate your controller handle. So, it was this rhythm you went through back and forth.

The trouble with gate cars, you'd get some of those in the series that didn't have the field shunt and you didn't get the top running speed you'd like to have. And, working the gates, although our gates were maintained very well, even in the winter time. It was another extra thing you had to do.

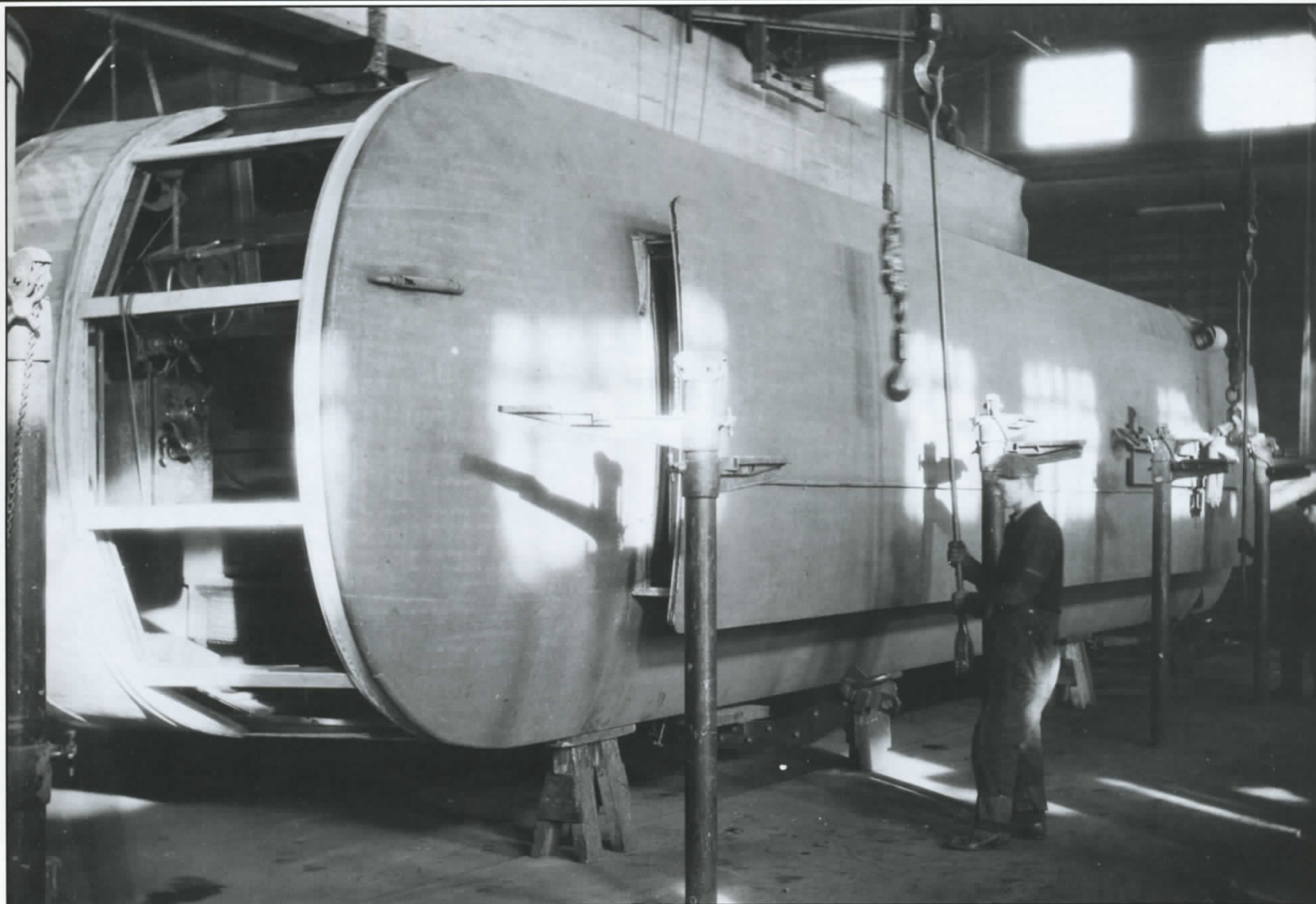
AI: Explain field shunts.

RS: It affected the top speed. When you got to the last controller position, there would be a kick in of another - well, on the gate cars it could be another 10-15 miles a hour. All the cars, for instance, on the Mahtomedi line (see page 29) had them because they had to go 55 out there to maintain their schedule. "Automatic 9th" they called it 'cause it kicked in when you got it into the 8th position. It seemed like it was there just momentarily and you could just feel a slight surge and that was the speed that you needed to maintain a good schedule.

The one-man, two-man button cars (see page 7) like our 1300, were excellent cars. Most of them performed about the same in terms of running speed; there were some that had bigger motors and you can tell when you got



Snelling Shops, where Twin City Lines built and rebuilt its streetcars.



The wood streetcars were torn down and rebuilt at Snelling Shops every five years. Minneapolis Public Library collection.

one because they would run just a little faster, had a little faster acceleration, and just had more power to them.

There were two kinds of brake valves on our button cars. There was the wide base valve which we have on 1300 and you could just feather it in and hold it, just ease a little bit of air in, and work it off, you had nice control of the air. The brake valves with the small base, I dreaded those things when I got them because they were more sensitive and you had to really be careful not to make a jerky stop, and, of course, nobody wanted to make a bad stop, it just wasn't the way you wanted to do it. When you are trying to work it with your knee, and make change, and talk to people, you like to have a valve which is less sensitive.

AI: As far as heat - I hear that the cars were pretty cold.

RS: Yeah, you see, not too many of the cars had electric heat, the 1300 being an all electric car, the 2000 series (lightweights) were all electric, and of course the PCC's were electrically

heated - they had plenty of heat on them, most of the time they were pretty comfortable. One of the problems with our cars, is that there were a lot of cubic inches of air in there; that's a big body on that thing, and you had those big barn doors. We had half-door switches so you could open half a front door or half a back door. We used that with regularity in cold weather cause you just didn't want that blast of air coming in. Most of the cars that we had were coal fired hot air and they could get pretty warm but on a really cold day with the doors open a lot, it was a problem.

AI: Did you run the lightweights? (see page 7).

RS: Yeah, we used them on Grand Avenue. Basically we used them more for trippers although there were some in regular service too. There were some good things about the car and there were some bad things. First of all, externally they were pretty quiet. They didn't make a lot of noise if you were standing on the street. Inside, they didn't have good insulation of the

trucks and the bodies so you got some vibration. They were not real fast, only about a 35 mph running speed if that - which was pretty tough when you were trying to maintain a fast schedule. In the rush hour it wasn't a problem; they actually accelerated faster than the other cars, they had a good rate of acceleration. They just didn't have very much running speed. The other problem they had was automotive type brakes - asbestos brake linings - so when you were trying to make a stop you could easily grab the brake on the lining and lock your wheels. If you had slippery rails - those babies would be like roller skates - you'd just take off. Those brakes tended to get kinda hot. I sometimes would walk through the yard and see smoke coming out from under the streetcar where the linings were too hot. They were comfortable to ride however. They had good suspension considering and the motorman had a big wide comfortable seat with a nice back unlike the other stools which were sort of after thoughts. I enjoyed operating them



On a windy day, women hold onto their hats as they cross in front of a Grand-Mississippi car in downtown St. Paul. Minnesota Historical Society collection.

except you had to be careful with them. You had to be careful you didn't lock your wheels, or spin your wheels, or do something crazy.

One of the things we didn't have, we didn't have good defrosters and for all winters they had to put an eisenglass frost window to keep you from being frosted up. They finally put in windshield wipers; for many years they were manual windshield wipers which were a disaster.

AI: I suppose that's just one more thing you needed a third arm for.

RS: Good thing you didn't have to steer it!

AI: And then, the PCC's.

RS: Of course that's like stealing money from the company when you operate them. It's the easiest thing in the world. I figure it took me five minutes to learn how. They were fun to operate. And your hands were free. They had to give you a bar to hang onto or you'd go through the windshield. But really, it was a very nice car to operate. The PCC's could outperform a standard car by far.

AI: Tell us about starters.

RS: Starters governed the operation on the street. You could count on a

starter ordinarily being anyplace on Lake Street - say Chicago, Nicollet, Hennepin, and sometimes Lyndale there'd be a starter almost all the time. Downtown there was a permanent starter shelter at 5th and Hennepin and there was usually almost always one down at 2nd and Marquette Avenue.

They would see if you weren't on time and do what they could to get you back on again. They used to do a lot of turn backs. If you were short-line car and you were going to pull in, and they needed someone to long-line, they'd tell you to long-line and you'd just simply write it on your trip sheet that you'd made an extra amount of mileage. If you were going to come back long-line and you were hopelessly late, they would get someone else to take your place, have you wye out, and fall back on your time. That was their job; to find out what was wrong and get it straightened out.

AI: Did you get much layover at the end of the line?

RS: Adequate usually unless we had problems with the weather or something. Sometimes you didn't get much layover. When I would work the Owl, that was

pretty interesting. If you were the one that had to come back for the next line up, they'd send you out early. You'd have a standing load at 1:00 a.m. At 56th and Bryant you'd look at your schedule, zero minutes to wye out and you had three signs to change. But ordinarily, you had never less than five minutes, usually 7-8 minutes, once in a while if you were lucky, ten minutes. That was the schedule department's job - to get you plenty of layover but not so much you wasted the equipment.

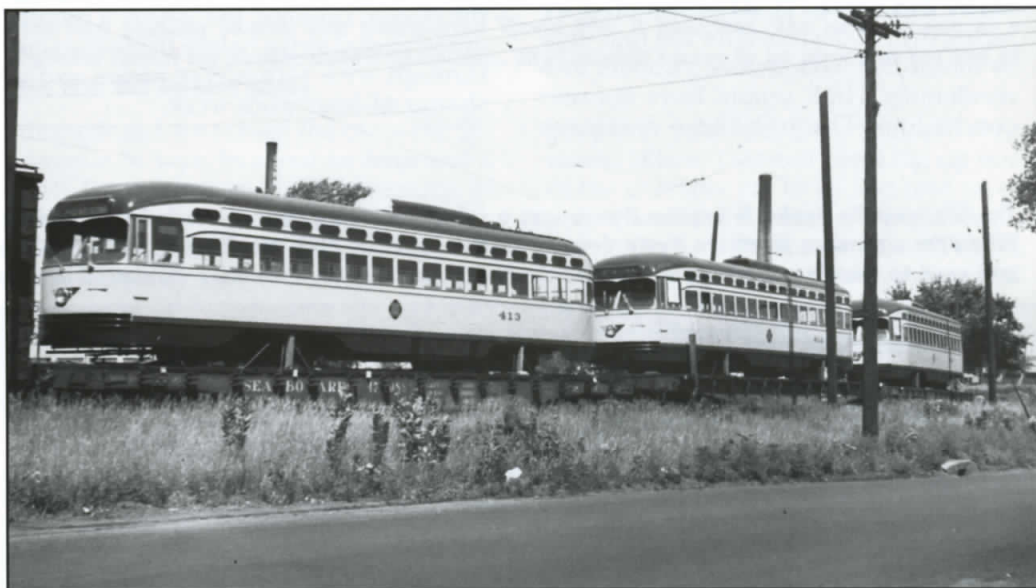
AI: What was the ridership on the Owl like?

RS: Surprisingly good on some lines. Weekends, like Fridays and Saturdays, were quite heavy. We had as many as four and five cars southbound on Bryant. Nicollet usually had a couple, and of course Hennepin always had a couple or three. For some reason, Bryant was very heavy. You always had a dozen or so people at 3:00 or 4:00 AM. All Owl cars met each other downtown for people who had to transfer. There was no such thing as missing the Owl. So that transfer conditions were always reliable. That was the way it operated.



Nicollet Park, home of the minor league Minneapolis Millers, was located at 31st & Nicollet, across the street from Nicollet Station. It was well served by streetcars. William J. Olsen collection.

The new PCC streamliners arrive at Snelling Shops on railroad flat cars. Norman Podas photo.



Part of the crew at Snelling Shops celebrates the retirement of a shop foreman. He is seated in the front row, second from the right.



THE WAR EFFORT

World War II put a terrific strain on TCRT. Gas and rubber rationing combined with a burgeoning war effort to quickly reverse the downward ridership slide of the 1930's. Ridership nearly doubled from 104 million in 1940 to 201 million in 1946. TCRT was able to purchase 90 additional buses, but no new streetcars. The University Avenue and Marshall Avenue express buses between the downtowns were eliminated and reassigned to help the local streetcars. New service was added from both cities to the New Brighton arms plant. The 323 streetcars scrapped during 1934-39 would have come in handy.

Equipment wasn't the only shortage. A third of the virtually all-male work force was eligible for military duty and many did serve. TCRT responded by hiring over 500 women for the first time as motormen, conductors, cleaners and mechanics. High school boys became conductors. Through these measures

they were able to expand the work force by about 15 percent.

Even these extreme measures weren't enough to handle the flood of new passengers, so the War Transportation Committees of the Twin Cities worked with businesses to stagger their work hours to spread out peak traffic.

Despite today's popular image of a home front united in the war effort, there was conflict between TCRT management and the Amalgamated Transit Union which represented most employees. The enormous traffic increase brought the company windfall profits and the employees, who worked a regular six day, 48 hour week, wanted a share of it. The War Labor Board dawdled settling the case, so on December 17, 1943, the union instructed its employees to stop working overtime. The extra hours were crucial to keeping the system running, but it took a month of the partial strike before the feds came through with retroactive raises and a shorter 44-hour work week.

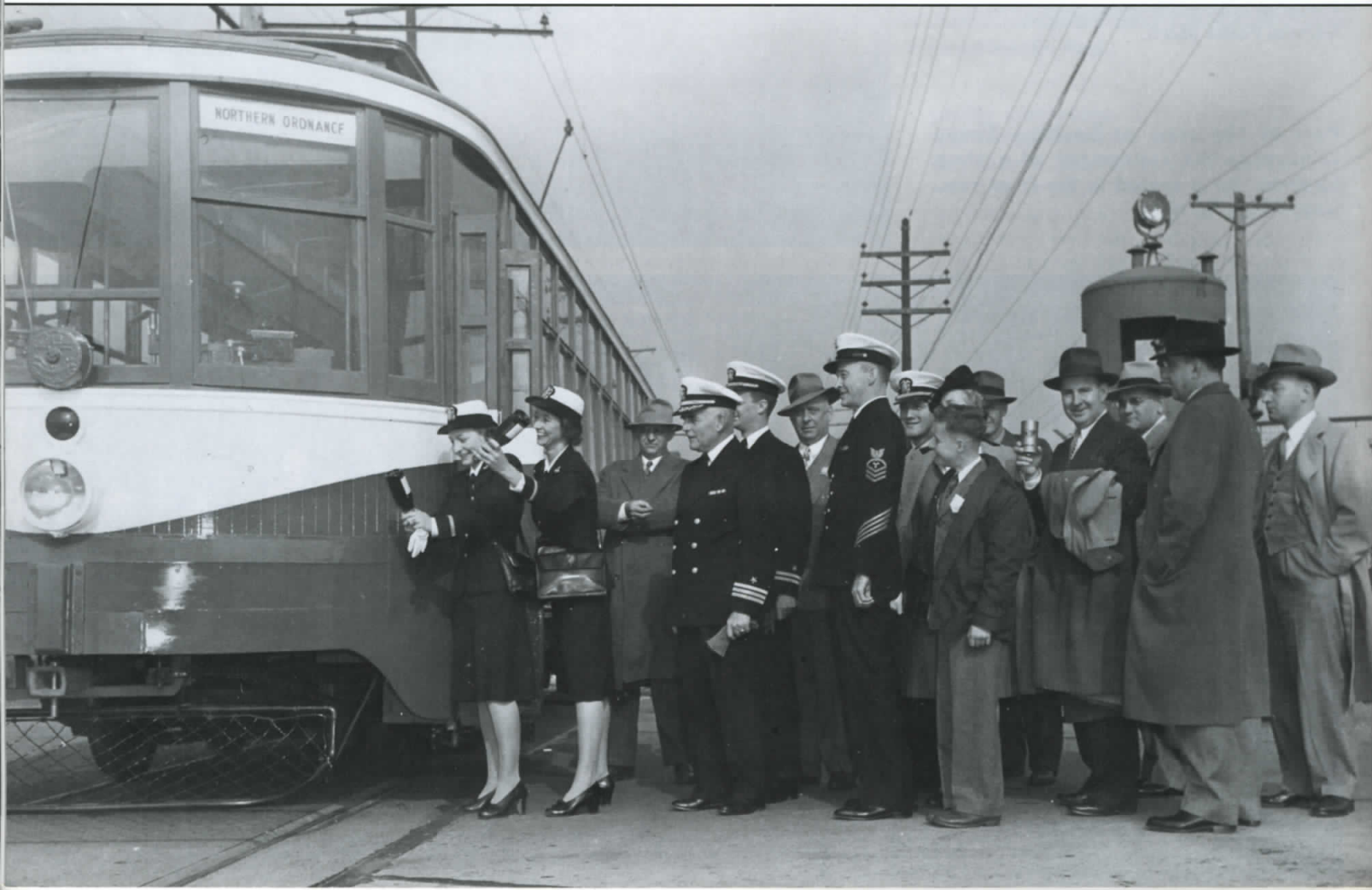
From the May 15, 1944 St. Paul Pioneer Press

Frank Fitzpatrick leaned over the controls in the motorman's compartment of the street car while he waited for the car to fill. The veteran of 38 years of service with the street railway company operates the dummy line at Fort Snelling—traveling the half mile from the Seventh Street bridge to the Reception Center 23 times each way daily. Nicknamed "Pop" by the GI Joes who are his regular passengers, Fitzpatrick, 67 years old, works the early shift, 6 AM until 2 PM daily except Sunday. He hauls an average of 800 passengers daily, which means he's carried around 600,000 soldiers and their families on his short run.

Tears have become a common sight to "Pop". Troop trains leave frequently, and when they've gone, Pop hauls the women back from the Reception Center.

"When they ride out to say goodbye," he says, "they want to cry but they don't. The lads don't like tears. It's when they come back that they let go. They sit all alone, and it doesn't make any difference how many people are in the car. They just cry."

The Minneapolis Anoka & Cuyuna Range was a suburban trolley that connected Minneapolis and Anoka. It was cut back to Fridley in 1939. When the enormous Northern Pump defense plant opened in 1943, the MA&CR's TCRT-built cars were restored, painted red, white and blue and used to shuttle workers to the end of the 2nd Street NE line. They were christened in proper Navy fashion.



"Sometimes," he added softly, "they get there too late, and the cookies and cake they brought out would have to be carried back. They throw the boxes away, right out the window."

"And the men do it too," he said. "I get fathers in here, just sitting and weeping."

VJ DAY

-Mary Ann Jones Turner,

It was six o'clock in the evening in the middle of the old Washington Avenue bridge. The whistles started blowing and the windows were open so you could hear the noise and people didn't know what was happening. Of course some of us had heard the reports that the war was going to be over, so I stopped the streetcar and I turned around and some lady asked me "What's going on? What's happening?", and I said "Ma'am, I think the war is over."

Then I looked at the people and I have never in my life seen so many expressions on people's faces. Some were laughing, some were crying, some were hugging each other. So many were praying. They got out in the aisle, kissing and hugging, yelling and screaming. It was the most magnificent thing I have ever seen and I shall never forget it. That is my most memorable experience and it still brings tears to my eyes to see the faces.

By the time I got the streetcar to 5th and Hennepin it was virtually impossible to get through. People were converging on downtown like they had gone absolutely mad. The police got us



The Fort Snelling Shuttle that transported World War II inductees. The car was one of a handful rebuilt for double-ended operations, so it wouldn't have to be turned at the end of the line. Bill Janssen photo.

through and we turned the car at the 5th Avenue N. wye. In about an hour and a half I got back to the University of Minnesota but from then on it was absolutely lost time. The kids from the university did everything but sit on the roof. My conductor came up and said she couldn't get any fares and I said, "You weren't really trying, were you?" She said no and I said why don't sit up here on the electrical box and so she did.

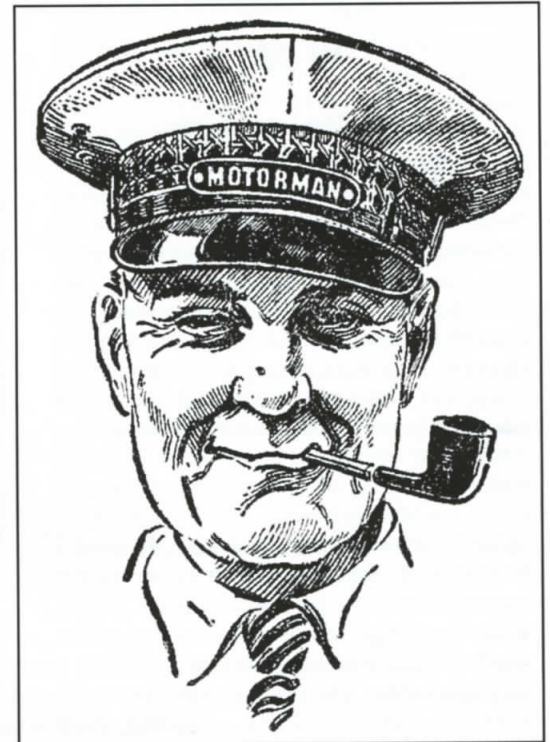
As we neared downtown St. Paul, they pulled us into the wye at the top of Wabasha Street by the state capitol and we sat there until probably two in the morning. You never saw so many

people in your life. They couldn't even move. When it started breaking up one of the checkers got to us and told us to put up a "Snelling Station" pullin sign. We got back to the station after 3 AM. It was quite a night. I was always grateful to the streetcar company, because I had the best seat in the house.

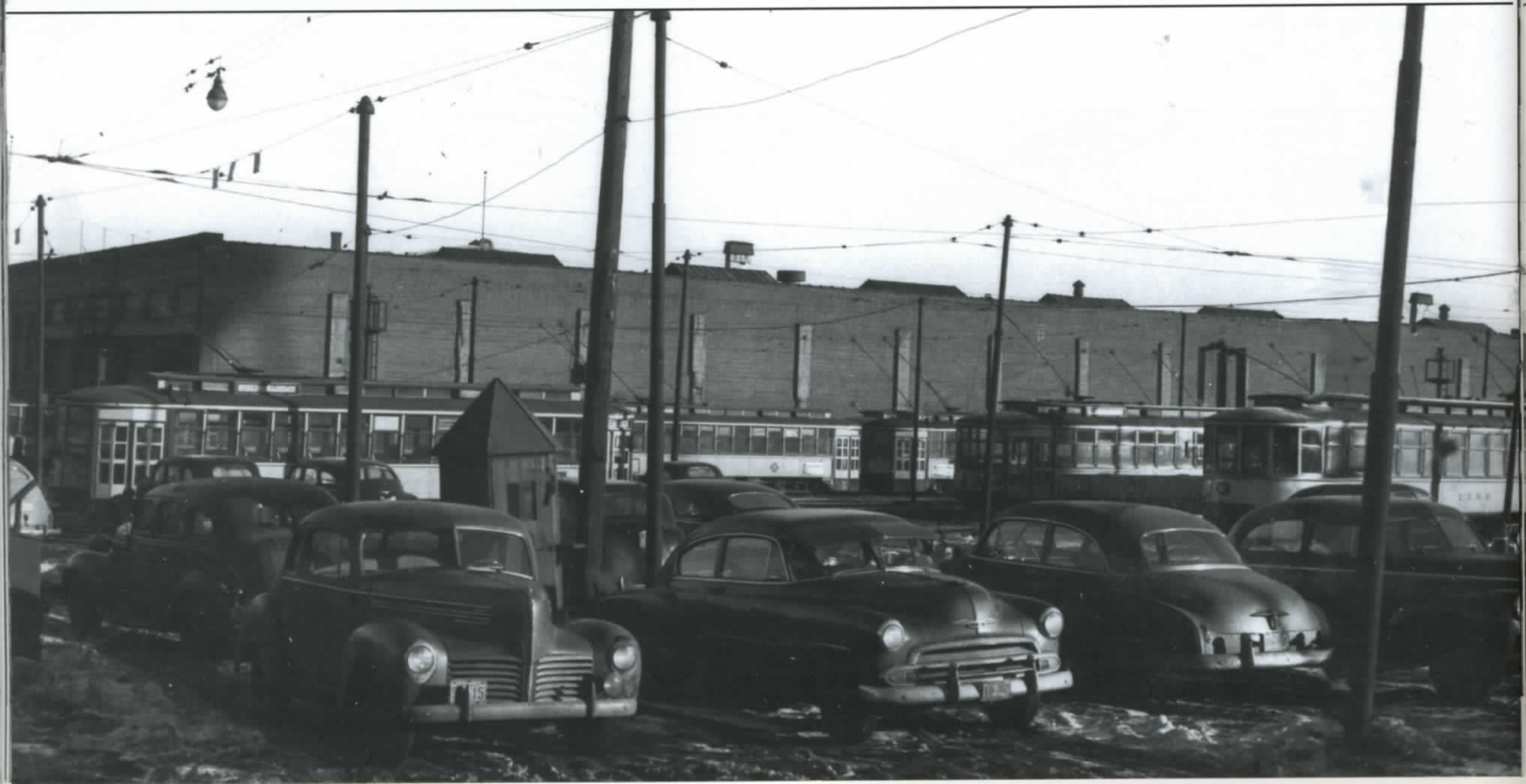
**First shift defense workers at the New Brighton Arsenal head for TCRT buses waiting to return them to Minneapolis and St. Paul.
Minnesota Historical Society collection.**



PEOPLE AND PLACES — A PHOTO GALLERY



Anyone around during the '40's will remember Bill the Motorman, TCRT's mythical media spokesman. Genial and fatherly, Bill put a human face on the company's messages in newspaper ads and car cards.



REMEMBERED ALLERY —

Left: Selby-Lake cars climbed the steep hill to the St. Paul Cathedral by means of the Selby Tunnel. The lower portal remains to this day.

The war effort brought the first female streetcar operators. This picture shows Ruben Lundquist with his wife Adeline (right) and her sister Jeanette Johnson. Minneapolis Public Library collection.

Below: Snelling Station on a cold winter day, with the Wards Midway tower in the right background. The building at left faced University Avenue and housed the trainmen's offices and maintenance tracks. Cars were stored in the open. This site is now occupied by Midway Shopping Center and Midway Bank. Minnesota Historical Society collection.



The vast majority of TCRT track was laid in the middle of city streets. There were two major exceptions to this, the remains of the former Mahtomedi and Hopkins in 1932, they still featured miles of high speed private right of way through the suburbs and open country. Top: This remains in service as part of the MTM's Como-Harriet Line. Center: The Como-Harriet private right of way crossed over 36th Street at East Calhoun. Bottom: A Mahtomedi car between North St. Paul and White Bear Lake.



The "Bottleneck", where Hennepin and Lyndale crossed next to the Walker Art Center. An Oak-Harriet car is descending Lowry Hill, named for the hill where the streets meet. When the freeway was built here, the scene changed dramatically and the statue was moved to 24th & Hennepin. Minneapolis

Stillwater and Lake Minnetonka lines. Cut back to
 piece of track along Lake Harriet at Linden Hills Blvd.
 on this bridge.



TCRT's Thomas Lowry, whose statue can be seen
 in the Minnesota Historical Society collection.





Above left: Looking west on University Avenue where Highway 280 is now. The lady is standing on one of the safety islands installed on University during the late '40's to protect passengers. St. Paul Pioneer Press-Dispatch photo, Minnesota Historical Society collection.

Right: Streetcars couldn't wade through deep water, which would short out their wheel-mounted motors. They usually couldn't detour either. Unfortunately, the notorious Washington Avenue viaduct flooded with some regularity. Star-Tribune collection.

Above: A lightweight car, probably on the Grand-Monroe line, approaches the elegant Metropolitan building on Marquette Avenue.

Left: Selby-Lake cars are delayed by a labor demonstration at the Minneapolis-Moline plant just east of Lake & Hiawatha. Star-Tribune collection.





The state capitol grounds were much smaller during the 40's, the front lawn extending only to what is now called Constitution Avenue. From there down the hill was a rather deteriorated residential neighborhood. In this 1949 scene, a University Avenue car is dropping downhill on Wabasha Street about a block north of where I-94 now is. Note the TCRT track crew at work. Minnesota Historical Society collection.

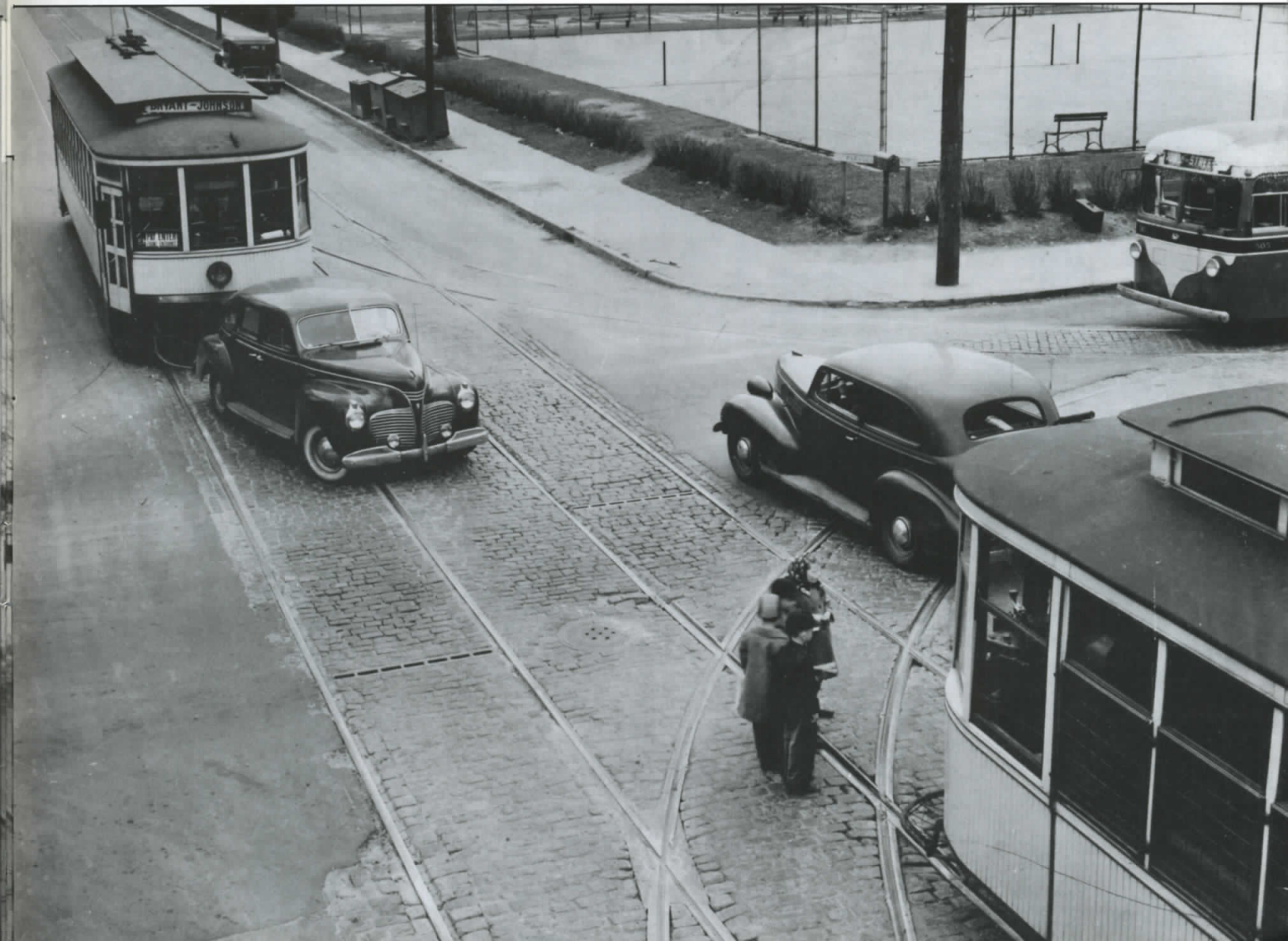
A Selby-Lake car crosses the Lake Street bridge and enters St. Paul. Minnesota Historical Society collection.





Car #2000 was TCRT's first attempt to build a lightweight car in 1916. Modified somewhat, it was one of only two lightweights with a deck roof. Here it has just crossed the Mississippi on the Broadway bridge, which used to empty into 13th Avenue NE. Bill Janssen photo.

School children cross Bryant Avenue S. at 38th Street The 38th Street Crosstown bus is laying over at the streetcar wye as two Bryant-Johnson cars meet. The wood boxes along the curb hold coal for the streetcar stoves, stove ash and sand for winter use.





Christmas in Uptown, 1949. Above: Looking east on Lake Street from Humboldt Avenue. This section of Lake Street never hosted streetcars. At left is the Twin City Lines bus to Glen Lake Sanitarium via Hopkins. At right is the independent Deephaven Bus Co., headed to downtown from Lake Minnetonka. Above right: Looking north on Hennepin from 31st Street. Morris & Christie's Market is still in business, and the Granada Theatre is now the Suburban World. Both Minneapolis Transportation Department collection.





Opposite bottom: An Intercampus Special on 15th Avenue SE prepares to cross University Avenue and enter the campus. The turnaround loop is one block ahead. The siding in the right foreground was used by the U of M's work car to access the shop building. Minneapolis Transportation Department collection.

Below: The Lowry name was much in evidence in downtown St. Paul. The streetcar on Wabasha has passed the Lowry Garage, Hotel Lowry and Lowry Medical Arts Building. St. Paul Pioneer Press-Dispatch photo, Minnesota Historical Society collection.



A GLOSSARY OF STREETCAR TERMS

backup control: With a handful of exceptions, all TCRT cars were single ended, with full controls only at the front end. Nonetheless, short backup moves were required to negotiate wyes at the ends of the lines and for switching at the carhouses. To make these moves safely, simple backup controls were installed on the rear platform, consisting only of on and off switches and an air brake lever.

bell signals: Gong-type bells mounted on the front and rear platform ceilings were connected by a leather pull cord. The motorman and conductor communicated with one another via bell signals, such as two to go forward and three to back up.

block signal: An automatic electric light used on TCRT to prevent collisions on sections of line having only a single track.

brake application, apply the air: The streetcars had air brakes, which were applied by opening a valve which released compressed air into the brake pipe, forcing the brake shoes to press against the steel wheel treads, slowing the car.

button cars, one-man, two-man cars: (see photo on page 7) Terms for a standard streetcar rebuilt for one-man operation with air operated folding doors. The doors were controlled by dashboard-mounted switches or "buttons".

changer: Multi-barreled coin changers were worn by the conductor or mounted on the dash by the motorman. Exact change wasn't required in those days.

conductor: On a two-man car, the crew member responsible for collecting fares and signaling the car to start up again.

controller: The device used by the motorman to regulate the amount and polarity of electricity to the car's motors, thereby determining the car's speed and direction.

deadman: A spring loaded air brake valve that served as a safety device to stop the car if the motorman was incapacitated. When released, the springs automatically applied the brakes.

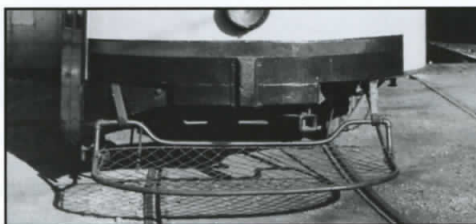
extra: An unscheduled streetcar trip. Extras ran for ballgames, parades and other events.

extra board: Motormen and conductors not assigned to a regular run. The extra board filled in for regular crew members who were absent. Originally the extra board was unpaid unless they received an assignment.

fare box, fare box readings: Passengers dropped their fare in the farebox. A crank on the side caused the coins and tokens to trip mechanical counters. The crew member would copy the numbers or "take the farebox reading" and enter these on his trip sheet.

fare register: On long suburban routes with multiple fare zone, a mechanical fare register was used to record the different fares. It was located in the rear of the car, on a pole above the rear farebox.

fender: Often mistakenly called a "cowcatcher", the fender was a steel mesh basket on the car front designed to scoop up a pedestrian who would otherwise have been run over by the car and killed or seriously injured.



flangeways: Streetcar wheels stay on the track because of flanges, the wider edge of the wheel that grips the inside of the rail. Because the rails were surrounded by pavement, special grooves or flangeways provided a place for the flange to travel.

frog, trolley frog: The frog guides the wheel flanges through track switches where the rails divide, which requires creating a flange way across another rail. Trolley frogs perform the similar function of guiding the double-flanged trolley wheel through switches where the trolley wire divides.

gate car: (see photo on page 6) All TCRT standard cars were originally built as gate cars. All passengers boarded and alighted through wire gates at the rear of the car. During the 1930's, many were rebuilt as one man-two man or "button" cars, with air operated folding doors.

gate side, pole side: The gate side is the right side of the car, where the gates were. The pole side is the left side.

gauntlet track: An unusual track arrangement where two parallel tracks are superimposed on one another to squeeze across a single track bridge. The gauntlet was cheaper to maintain than two switches with their moving parts.

headway: The time interval between streetcars. A five -minute headway means that a car arrives every five minutes.

layover, layover point: Layover is the time between trips at the end of the line. It is taken at the layover point.

lightweight: (see photo on page 7) A lighter weight streetcar built in the 1920's to reduce electric power consumption.

lineups: The infrequent late night "owl" cars all met in downtown to ensure that passengers made their connections. The lineups lasted about five minutes.

loop car: A car destined only for downtown, then referred to as "the Loop".



motorman, motorette: The crew member responsible for running the streetcar, either alone or with a conductor. Motorette was the rather awkward attempt to feminize the job title when women were hired during World War II.

notch 8, the "company notch": The controller position that provided the maximum speed to the motors.

owl car: Streetcars that ran all night long, usually once an hour.

PCC: Short for Presidents Conference Committee, the PCC was the streetcar industry's joint effort to design a fast, modern, comfortable car that could compete with the automobile. PCC cars were first developed in 1935, but TCRT didn't buy their 141 until after the war.

plug in: Motormen and conductors reported to work by placing a wood plug next to their name on the plug board.

power loss: In some spots on the system, electric voltage was reduced and cars ran slower because of the distance to the nearest substation or because of the number of cars on the line simultaneously.

pull out, pull in: Leaving or entering the streetcar station, or running not in service between the station and the route.

regular run: Work assigned to the same crew every day.

resistance heating: Electric heat, like a toaster or space heater, installed in some of the cars to replace coal-fired heaters.

retriever: The spring loaded reel that gathered in the trolley pole rope and pulled down or "retrieved" the trolley pole if it dewired, to prevent it from tearing down the wire.



safety zone, safety island: Boarding areas in the middle of the street where passengers could wait for the streetcar.

shortline, turn back: An intermediate point on the line where some streetcars ended their trips.

skip-stopping: When two cars ran together, they would each stop at alternate stops, thereby speeding the trip for both.

special work: Complex track where lines crossed or diverged.

standing load: A passenger load exceeding the car's seated capacity.

starter: A supervisor located at certain important intersections to keep cars on time, and reschedule as necessary to meet demand or operating conditions.

station, station clerk: Station was the TCRT term for car barn or garage. The station clerk handled a wide variety of clerical chores, including assigning crews and streetcars.

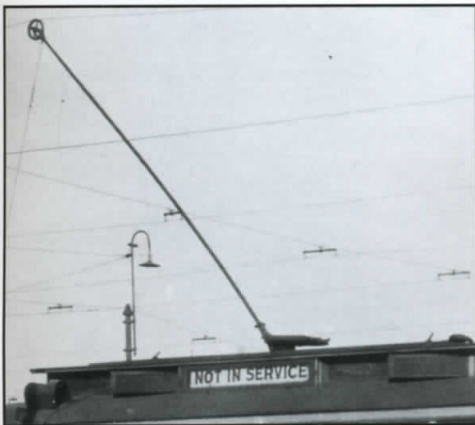
switch rod, switch rod hole: A steel pole with a flattened tip used to pry track switches into position. A long rod could be lowered through the switch rod holes in the floor. Motormen who chewed tobacco would spit the juice through the switch rod hole.

terminal: The end of the line.

time points: Major intersections along the line with a scheduled departure time.

tripper: A short rush hour streetcar run.

trolley pole, trolley wheel: The trolley pole reached from the car roof to the overhead wire to access electricity. The trolley wheel at the end of the pole rolled along the wire.



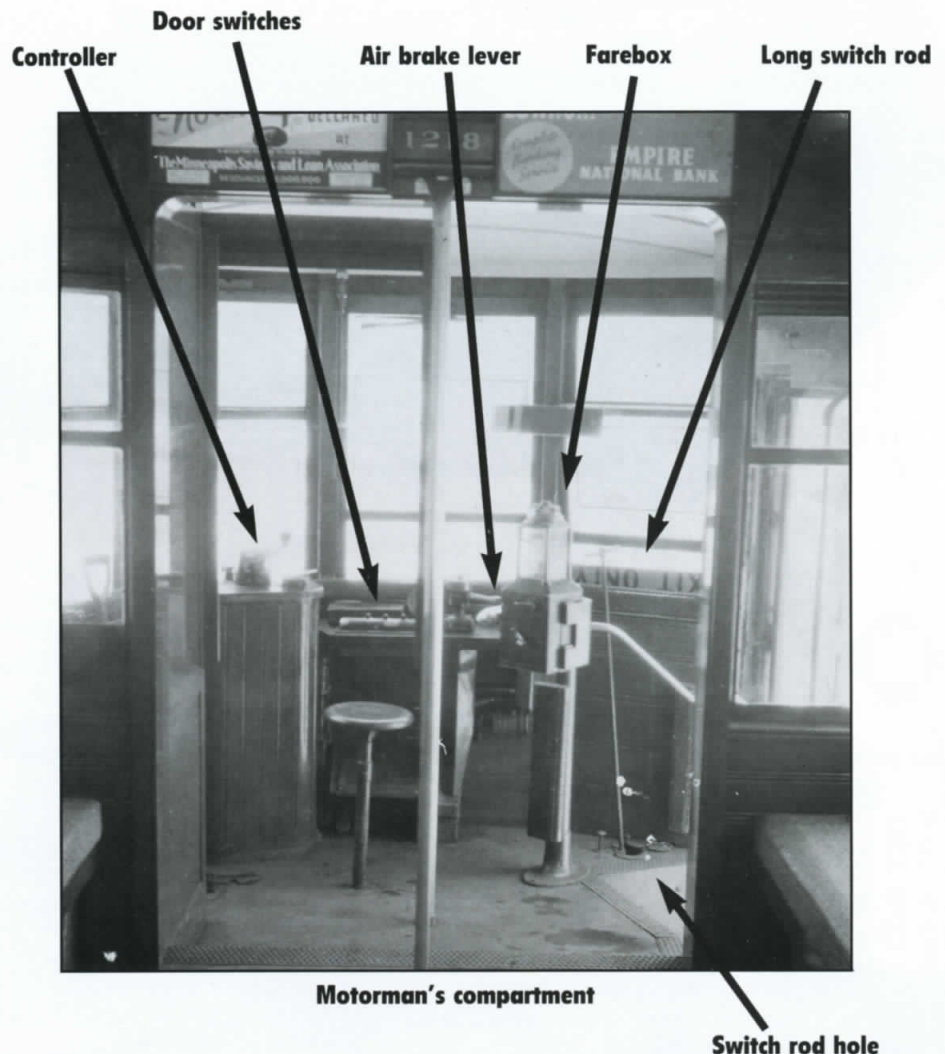
turn on the air, pump up the air: Activate the air compressor, which powered the brakes, doors, whistle, foot gong and windshield wiper.

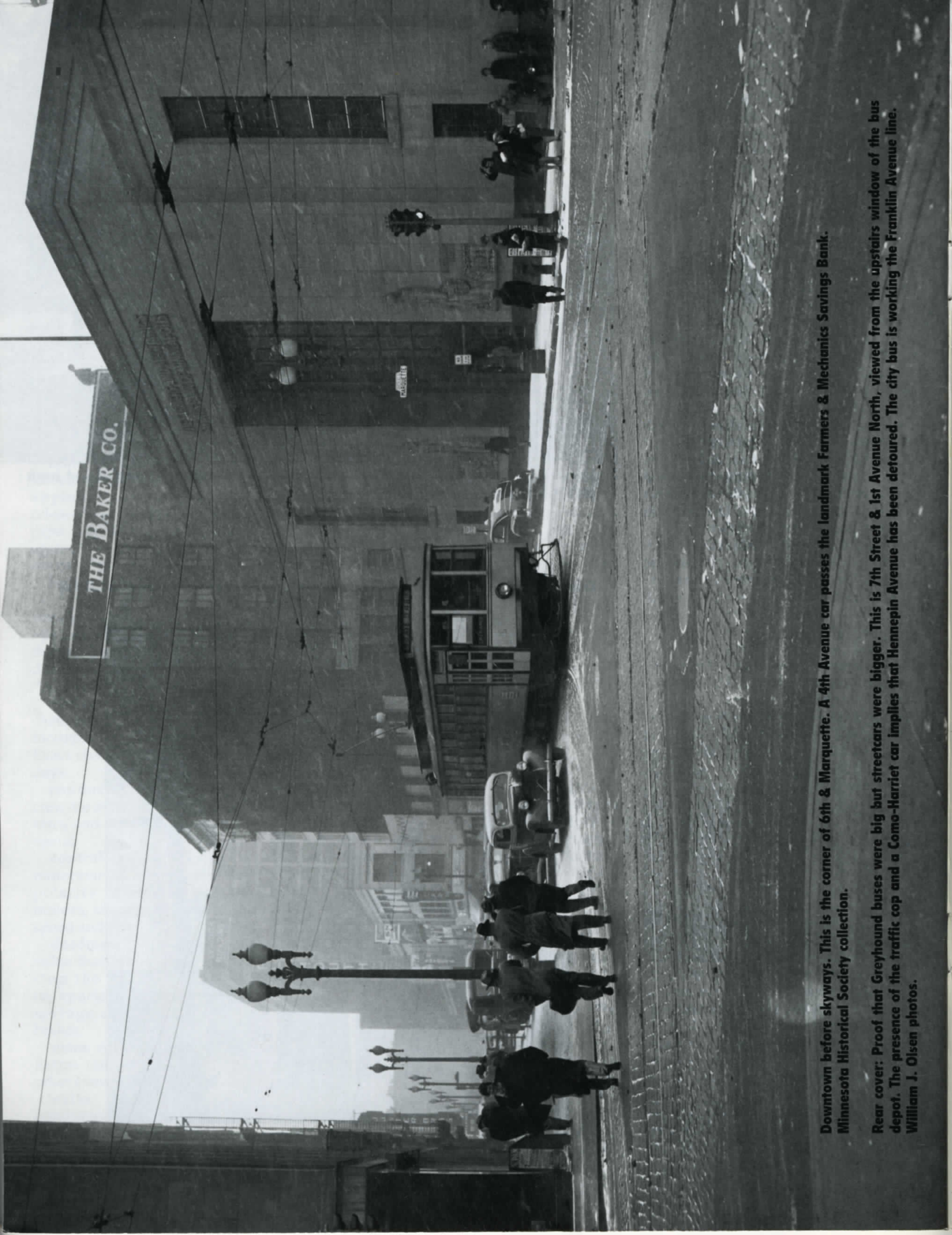
work car: Any of various non-revenue trolleys that plowed snow, hauled materials or performed other maintenance tasks.

wye: A triangle of track used to turn cars at the end of the line. Wying a car required two forward and one backward moved to complete the maneuver (see photo on page 33).



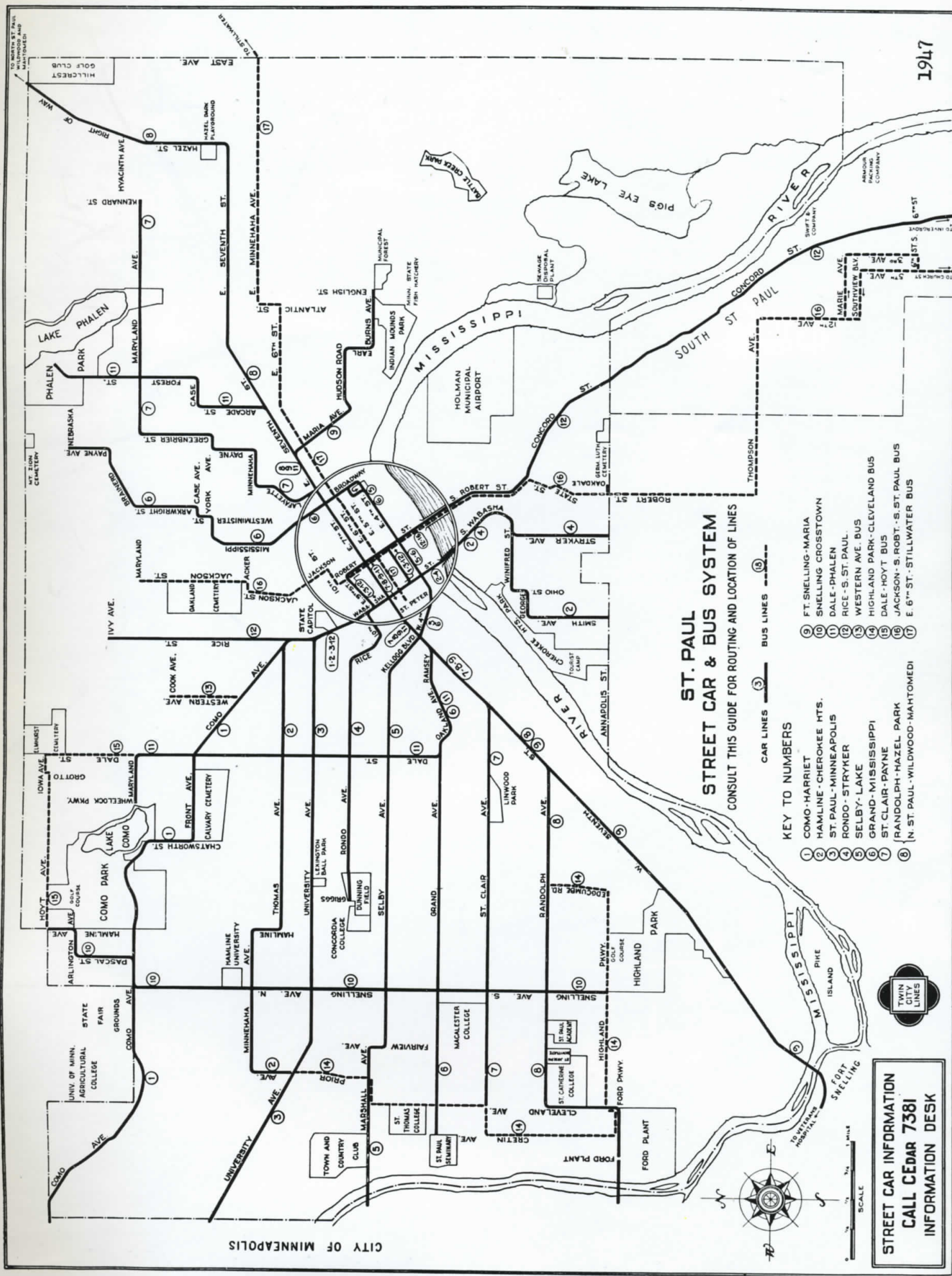
There were many types of specialized work cars. This one delivered and placed track materials. Gordon Bassett collection.





Downtown before skyways. This is the corner of 6th & Marquette. A 4th Avenue car passes the landmark Farmers & Mechanics Savings Bank. Minnesota Historical Society collection.

Rear cover: Proof that Greyhound buses were big but streetcars were bigger. This is 7th Street & 1st Avenue North, viewed from the upstairs window of the bus depot. The presence of the traffic cop and a Como-Harriet car implies that Hennepin Avenue has been detoured. The city bus is working the Franklin Avenue line. William J. Olsen photos.



ST. PAUL STREET CAR & BUS SYSTEM

CONSULT THIS GUIDE FOR ROUTING AND LOCATION OF LINES

CAR LINES ①-⑩ BUS LINES ⑪-⑲

KEY TO NUMBERS

- ① COMO-HARRIET
- ② HAMLINE-CHEROKEE HTS.
- ③ ST. PAUL-MINNEAPOLIS
- ④ RONDO-STRYKER
- ⑤ SELBY-LAKE
- ⑥ GRAND-MISSISSIPPI
- ⑦ ST. CLAIR-PAYNE
- ⑧ RANDOLPH-HAZEL PARK
- ⑨ FT. SNELLING-MARIA
- ⑩ SNELLING CROSTOWN
- ⑪ DALE-PHALEN
- ⑫ RICE-S. ST. PAUL
- ⑬ WESTERN AVE. BUS
- ⑭ HIGHLAND PARK-CLEVELAND BUS
- ⑮ DALE-HOYT BUS
- ⑯ JACKSON-S. ROBT. S. ST. PAUL BUS
- ⑰ E. 6TH ST.-STILLWATER BUS

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August 2021

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